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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/929,282	08/15/2001	Finn Wredenhagen	1020457.0012	8113

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MARGER JOHNSON & MCCOLLOM, P.C.
210 SW MORRISON STREET, SUITE 400
PORTLAND, OR 97204

EXAMINER

LE, BRIAN Q

ART UNIT	PAPER NUMBER
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2623

DATE MAILED: 08/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/929,282

Applicant(s)

WREDENHAGEN ET AL.

Examiner

Brian Q. Le

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 December 2004.
2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-6 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 08 December 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Response to Amendment and Arguments

1. Applicant's amendment filed December 08, 2004, has been entered and made of record.
2. Applicant's arguments with regard to claims 1-6 have been fully considered, but are not considered persuasive because of the following reasons:

Regarding claim 1, the Applicant argues (page 5) that Greggain does not teach feature extractor. Due to broadly and confusing claimed languages, the Examiner can reasonably interpreted that line segmentation is feature extractor. The Applicant further argues (page 5) that Greggain does not disclose the identification of predetermined image features. Again, this can be broadly interpreted as the determination of reference pixel in region of the image (FIG. 7A, element 50). To further assist the Applicant with the guidance with claim language interpretations so that the Applicant can add further/more details limitations from the specification to the claims to overcome the prior arts, the Examiner is presenting MPEP, section 2111, Claim Interpretation; Broadest Reasonable Interpretation as follow: "The court explained that "reading a claim in light of the specification, to thereby interpret limitations explicitly recited in the claim, is a quite different thing from reading limitations of the specification into a claim,' to thereby narrow the scope of the claim by implicitly adding disclosed limitations which have no express basis in the claim." The court found that applicant was advocating the latter, i.e., the impermissible importation of subject matter from the specification into the claim.). See also *In re Morris*, 127 F.3d 1048, 1054-55, 44 USPQ2d 1023, 1027-28 (Fed. Cir. 1997) (The court held that the PTO is not required, in the course of prosecution, to interpret claims in applications in the same manner as a court would interpret claims in an infringement suit. Rather, the "PTO applies to verbiage of the proposed claims the broadest reasonable meaning of the words in their

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ordinary usage as they would be understood by one of ordinary skill in the art, taking into account whatever enlightenment by way of definitions or otherwise that may be afforded by the written description contained in applicant's specification."").

3. Applicant's arguments, see "Remarks", filed December 12, 2004, with respect to the rejection(s) of claim(s) 2 under 35 U.S.C. 102(e) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Fandrianto U.S. Patent No. 5,901,248.

Thus, the rejections of all of the claims are maintained.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 1-6 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Regarding claim 1, the amended limitations "feature extractor to identify a **predetermined image feature in a pixel sequence**"; "feature comparator to compare similar **predetermined image features in adjacent pixel sequences**" and "alignment controller to generate target pixel **responsive to the feature comparator**". The cited locations by the Applicant do not show the support for the amended limitations. The Applicant must clearly

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show the exact location (page and line number) which supported these amended limitations.

Claims 2-5 are having the same issues.

Claim not specifically addressed depend from indefinite antecedent claims.

Claim Objections

6. Claims 1-6 are objected to because these claims are very difficult to understand due to the use of confusing language. In addition, amended limitations (as discussed under 112, first paragraph rejection) are not supported in the specification, which make it difficult for the Examiner to further consider the claim's limitation. Appropriate correction is required. The prior art rejection based on the Examiner's best understanding.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 1, 3 and 5 are rejected under 35 U.S.C. 102(e) as being anticipated by Greggain U.S. Patent No. 5,991,463.

Regarding claim 1, Greggain teaches an interpolator for processing an image (abstract) comprised of an array of pixels (pixels) (abstract), the interpolator comprising:

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- (a) a feature extractor (line segmentation) (column 2, lines 18-20) to identify a predetermined image feature (reference pixel in region of the image) (FIG. 7A, element 50) in a pixel sequence (pixels along the same direction) (column 5, lines 24-38 and column 6, lines 13-21);
- (b) a feature comparator to compare similar predetermined image features (column 3, lines 18-21 and column 3, 49-52) in adjacent pixel sequences (pixels along the same direction) (FIGs. 1-6).
- (c) an alignment to generate a target pixel responsive to the feature comparator (column 2, lines 6-9).

Referring to claim 3, Greggain teaches an interpolator said feature comparator including a correlator to correlate the similar predetermined image features (column 6, lines 13-21).

Regarding claim 5, please refer back to claim 1 for the teaching and explanation.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 2, 4, and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Greggain U.S. Patent No 5,991,463 as applied to claim 1 above, and further in view of Fandrianto U.S. Patent No. 5,901,248.

For claim 2, Greggain does not explicitly teaches that feature extractor including a programmable state machine. Fandrianto further teaches an interpolation method (motion estimation) wherein feature extractor (pixel extraction) (column 18, lines 23-25) includes a programmable state machine (column 3, lines 55-60). Modifying Greggain's method of

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interpolating images according to Fandrianto would be able to provide a machine, which can be programmable so that various algorithm/program/routine can be programmed to perform a desired extracting method. This would improve processing and therefore, it would have been obvious to one of the ordinary skill in the art to modify Greggain according to Fandrianto.

Regarding claim 4, Greggain does not explicitly teach the computing a sequence of relative shifts between adjacent rows. Fandrianto further teaches an interpolation method comprises a step of computing a sequence of relative shifts between adjacent rows (column 17, Table 1 and column 18, Table 1). Modifying Greggain's method of interpolating an image according to Fandrianto would be able to provide a sequence of relative shifts to the interpolation and prediction error computations (column 14, lines 1-25). This would improve processing and therefore, it would have been obvious to one of the ordinary skill in the art to modify Greggain according to Fandrianto.

For claim 6, please refer back to claim 2 for the teaching and explanation.

Conclusion

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

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CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

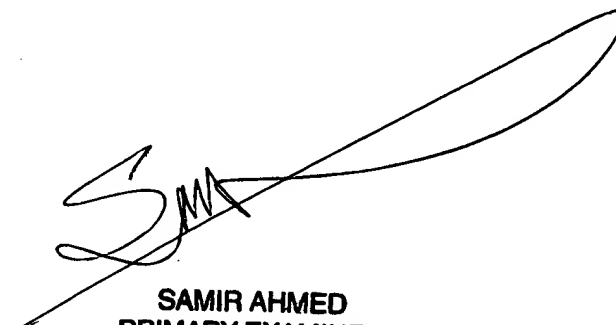
Contact Information

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian Q Le whose telephone number is 571-272-7424. The examiner can normally be reached on 8:30 A.M - 5:30 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amelia Au can be reached on 571-272-7414. The fax phone numbers for the organization where this application or proceeding is assigned are 571-273-8300 for regular communications and 571-273-8300 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

BL
August 17, 2005



**SAMIR AHMED
PRIMARY EXAMINER**